

**FACILITY STATUS CHANGE FORM**

<b>Date Submitted:</b> 9-8-2014	<b>Area:</b> 100-N	<b>Control #:</b> D4-100N-0065 <b>A</b>
<b>Originator:</b> Dan Saueressig	<b>Facility ID:</b> 100-N AOC Area 9	
<b>Phone:</b> 509-521-5326	<b>Action Memorandum:</b> 100-N Ancillary Facilities	

**This form documents agreement among the parties listed below on the status of the facility D&D operations and the disposition of underlying soil in accordance with the applicable regulatory decision documents.**

**Section 1: Facility Status**

☒ All D4 operations required by action memo complete.

☐ D4 operations required by action memo partially complete, remaining operations deferred.

**Description of Completed Activities and Current Conditions:**  
AOC Area 9 functioned primarily as roadways and asphalted access areas to various support buildings north of the 105-N Reactor. Many Building footprints and waste sites were located within Area 9 which have their own closure documents [Facility Status Change Forms for ancillary facilities and Remaining Sites Verification Packages (RSVPs) or Closure Verification Packages (CVPs) for waste sites]. Some waste sites do not have approved RSVPs/CVPs in place, however backfill concurrence forms have been approved allowing backfill of the sites while the RSVPs/CVPs are finalized. AOC Area 9 has been backfilled in preparation for revegetation. Also, waste site 100-N-106, Shallow Petroleum-Only Releases, in AOC Area 9 will be addressed in the final ROD for the 100-N Area and 100-N-85, potential deep zone contamination associated with the 1716-N Gas Station Fuel Tanks, will be characterized in FY15 and addressed in the final ROD for 100-N if contamination above Remedial Action Goals is discovered.

**Description of Deferral (as applicable):**  
N/A

**Section 2: Underlying Soil Status**

☐ No waste site(s) present. No additional actions anticipated.

☒ Documented waste site(s) present. Cleanup and closeout to be addressed under Record of Decision.


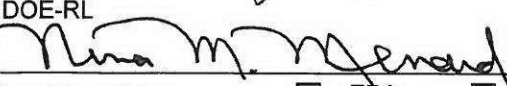
☐ Potential waste site discovered during D4 operations. Waste site identification number <to be> assigned.  
Cleanup and closeout to be addressed under Record of Decision.

**Description of Current/As-Left Conditions:**  
AOC Area 9 functioned primarily as roadways and asphalted access areas to various support buildings north of the 105-N Reactor. Many Building footprints and waste sites were located within Area 9 which have their own closure documents [Facility Status Change Forms for ancillary facilities and Remaining Sites Verification Packages (RSVPs) or Closure Verification Packages (CVPs) for waste sites]. Some waste sites do not have approved RSVPs/CVPs in place, however backfill concurrence forms have been approved allowing backfill of the sites while the RSVPs/CVPs are finalized. AOC Area 9 has been backfilled in preparation for revegetation. Also, waste site 100-N-106, Shallow Petroleum-Only Releases, in AOC Area 9 will be addressed in the final ROD for the 100-N Area and 100-N-85, potential deep zone contamination associated with the 1716-N Gas Station Fuel Tanks, will be characterized in FY15 and addressed in the final ROD for 100-N if contamination above Remedial Action Goals is discovered.

**Identification of Documented Waste Site(s) or Nature of Potential Waste Site Discovery (as applicable):**  
N/A

**Section 3: List of Attachments**  
Sample Determination Form (SDF-100N-040)

**FACILITY STATUS CHANGE FORM**

		9/19/14
DOE-RL		Date
Lead Regulator	<input type="checkbox"/> EPA <input checked="" type="checkbox"/> Ecology	9/18/14
		Date

**DISTRIBUTION:**

EPA: Dennis Faulk, B1-46

Ecology: Wanda Elliott, H0-57

DOE: Rudy Guercia, A3-04

Document Control, H4-11 H0-30

Administrative Record, H6-08 100-NR-1

SIS Coordinator: Benjamin Cowen, H4-22

D4 EPL: Chris Strand, L4-45

Sample Design/Cleanup Verification: Theresa Howell, H4-23

FR Engineering: Rich Carlson, H4-22

FR EPL: Dan Saueressig, X8-02

# 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-040

## A. INSTRUCTIONS

*This form must be completed to: 1) document existing data in order to determine if current data is suitable to prove completion of 100-N Ancillary Facilities, or 2) document that site-specific sampling and analyses are needed to provide completion for 100-N Ancillary Facilities.*

## B. GENERAL INFORMATION

Building Name: 100-N AOC Area 9

Building Number: N/A

### WIDS Sites Associated or Adjacent:

Historical information reviewed indicates AOC Area 9 functioned primarily as roadways and asphalted access areas to various support buildings north of the 105-N Reactor. Many Building footprints and waste sites were located within Area 9 which have their own closure documents [Facility Status Change Forms for ancillary facilities and Remaining Sites Verification Packages (RSVPs) or Closure Verification Packages (CVPs) for waste sites]. Some waste sites do not have approved RSVPs/CVPs in place, however backfill concurrence forms have been approved allowing backfill of the sites while the RSVPs/CVPs are finalized. Also, waste site 100-N-106, Shallow Petroleum-Only Releases, in AOC Area 9 will be addressed in the final ROD for the 100-N Area and 100-N-85, potential deep zone contamination associated with the 1716-N Gas Station Fuel Tanks, will be characterized in FY15 and addressed in the final ROD for 100-N if contamination above Remedial Action Goals is discovered.

100-N-26, French Drain 2 Liquid Waste Site (100N TBR 4.87), Interim Closed Out, RSVP-2012-056, WSRF No. 2012-056, Transmittal Letter dated October 3, 2012 (CCN 167980).

100-N-59, Radioactively Contaminated Soil Northeast of 105-NB Building, Interim Closed Out, RSVP-2012-080, WSRF No. 2012-080, Transmittal Letter dated January 14, 2013 (CCN 169258).

100-N-63:2, Pipelines Between 109N, 105N, 107N, 1310N, 1322N, 1926N And 36" Process Drain to Outfall, Interim Closed Out, CVP-2013-00001, WSRF No. 2013-048, Transmittal Letter dated October 9, 2013 (CCN 172912).

100-N-66, 105-N/109-N Reactor Building Complex.

100-N-84:1, 100-N Area Raw Water Pipelines, No Action, RSVP-2010-019, WSRF No. 2010-019, Transmittal Letter dated December 12, 2012 (CCN 169002).

100-N-84:2, 100-N Area Fuel and Foam Pipelines, Interim Closed Out, RSVP-2014-088, WSRF No. 2014-088, Transmittal Letter dated September 3, 2014 (CCN 176946).

100-N-84:3, 100-N Area Filtered and Potable Water Pipelines, No Action, RSVP-2010-020, WSRF No. 2010-020, Transmittal Letter dated November 14, 2012 (CCN 168594).

100-N-84:4, 100-N Area Steam and Condensate Pipelines, Accepted.

100-N-84:5, 100-N Area Sanitary Pipelines, Accepted.

100-N-84:6, 100-N Area Chemical and Process Sewer Pipelines, Accepted.

100-N-84:7, 100-N Area Unidentified and Other Miscellaneous Pipelines, No Action, RSVP-2011-092, WSRF No. 2011-092, Transmittal Letter dated May 30, 2012 (CCN 165808).

100-N-84:8, 100-N Area Unidentified Pipelines within Planned Excavations, No Action, WSRF No. 2014-002, Transmittal Letter dated April 10, 2014 (CCN 175521).

100-N-84:9, 100-N Area Active Raw Water Pipelines, No Action, RSVP-2010-019, WSRF No. 2012-012, Transmittal Letter dated December 12, 2012 (CCN 169002).

100-N-85, 1716-N Gas Station Fuel Tanks, Accepted.

100-N-102:2, 100-N Potentially Contaminated French Drains and Drain Lines, Group 2, 100-N Potentially Contaminated French Drains, Group 2, No Action, WSRF No. 2012-001, Transmittal Letter dated June 26, 2012 (CCN 166346).

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100-N-103:1, 100-N Steam Condensate French Drains (inactive), No Action, RSVP-2011-114, WSRF No. 2011-114, Transmittal Letter dated July 30, 2012 (CCN 166823).

100-N-106, Shallow Petroleum-Only Releases, Accepted.

120-N-4, 1310-N Hazardous Waste Storage Area, 1310-N Waste Oil Storage Pad, 1310-N Non-Hazardous Waste Pad, 1524-N, Interim Closed Out, RSVP-2014-024, WSRF No. 2014-024, Transmittal Letter dated June 12, 2014 (CCN 176293).

UPR-100-N-6, 1 1/2 Inch Chemical Decontam. Waste Drain Line Leaks, UN-100-N-6, UN-116-N-6, Chemical Decontamination Waste Drain Line Leak, Interim Closed Out, RSVP-2012-081, WSRF No. 2012-081, Transmittal Letter dated January 21, 2013 (CCN 169517).

UPR-100-N-38, 116-N-2 Facility Liquid Unplanned Release, 100-N Spring 1983 Caustic, Truck Spill 116-N-2, Rejected, WSRF No. 2000-094.

## Other:

Buildings within or near AOC Area 9 include the 105-N Reactor Building and Fuel Storage Basin, 105-NB Maintenance Shop Addition, Mobile Office 1100-N, 11-N Change Room, 13-N Storage Building, 1112-N Guardhouse, 1112-NA Microwave Tower, 1112-NB Badgehouse, 1524-N Hazardous Waste Storage Pad, 1525-N Laydown Storage Area, 1614-N Environmental Monitoring Station, 166-N Fuel Oil Storage Pumphouse, 1706-N Storage Building, 1712-N Maintenance Shop, 1714-N Warehouse, 1714-NA/NB Tool Storage Shed, 1715-N Diesel Oil Storage Tanks, 1716-N Gas Station Pumps, 1724-N Nitrogen Electrical Control Structure, 1734-N Gas Bottle Storage Area, 184-ND Fuel/Diesel Oil Day Tanks and 1904-NC Sanitary Sewer Lift Station No. 3. Wells within 10 feet from AOC Area 8 that haven't been decommissioned include wells 199-N-16, 199-N-57 and 199-N-87.

## C. INFORMATION SOURCES

Available information (list document number for each if applicable):

Historical Site Assessment: N/A

Site Walkdown: See Attachment 3

IH Characterization Report: N/A

Radiological Survey: See Attachment 4

IHC/FHC Document: N/A

WIDS/SIS: See Section B above.

PDSR: N/A

Facility Inspection: Visual Inspection (Attachment 3)

Waste Characterization Checklist: N/A

Summary Report: N/A

Other:

## D. HAZARDOUS SUBSTANCES

Check all that apply:

☒ None ☐ Asbestos containing material ☐ Lead ☐ PCBs/PCB Articles ☐ Oils/Greases

☐ Chemicals List: \_\_\_\_\_

☐ Radiological Contamination ☐ Mercury/Mercury Devices

☐ Other: \_\_\_\_\_

References/Comments:

Liquids: ☐ Yes ☒ No

# 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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If yes, describe source and nature of liquids:

Were the hazardous substances removed from the facility prior to demolition? ☐ Yes ☒ No

As verified by what documentation:

The AOC is not a facility. Surrounding facilities have their own FSCFs.

Was there potential for hazardous substances to be introduced into the soils during facility operations or demolition? ☐ Yes ☒ No ☐ N/A

References/Comments:

Visual inspection performed (Attachment 3) confirming no staining or other anomalous conditions observed.

List any hazardous materials left in the building for demolition:

N/A

Does review of historical records and process knowledge indicate a potential for radiological or chemical contamination to be present in the facility?

No

Comments:

## E. FIELD OBSERVATIONS

### Visual Inspection

Were any stained soils/anomalies discovered during or after demolition of the facility? ☐ Yes ☒ No

References/Comments:

Were samples taken of the stained soils/anomalies? ☐ Yes ☐ No ☒ N/A

References/Comments:

Do results of the samples indicate that chemical contamination exists? ☐ Yes ☐ No ☒ N/A

References/Comments:

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:

### Radiological Surveys

Did radiological surveys (GPERS or equivalent) identify contamination? ☐ Yes ☒ No

References/Comments:

Radiological surveys of AOC Area 9 for beta and gamma contamination using GPERS identified no contamination greater than 1.5 x background except where residual deep zone contamination was left as documented in the respective RSVP/CVP. A composite diagram of the survey is presented in Attachment 4.

Were samples taken of the radiologically contaminated soils? ☐ Yes ☐ No ☒ N/A

References/Comments:

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:

# 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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Were the contaminated materials removed?

☒ Yes ☐ No ☐ N/A

References/Comments:

Any radiologically contaminated soil discovered was removed with the waste site excavation unless residual deep zone contamination was left as documented in the respective RSVP/CVP.

## F. WIDS SITES

Were there any WIDS sites affected by D4 activities? ☐ Yes ☒ No

If yes, list the WIDS sites:

Were the WIDS site(s) completely removed?

☐ Yes ☒ No

References/Comments:

Waste site 100-N-106 is being evaluated in the final ROD for the 100-N Area. Waste site 100-N-85 (potential deep zone contamination) is being characterized in FY15 and if contamination above remedial action goals is discovered, it will be addressed in the final ROD for the 100-N Area. The remaining WIDS sites in the vicinity of AOC Area 9 have been remediated and are either interim closed out or are in the process of being closed out.

Will the Ancillary Facility Footprint be deferred to FR to be closed out with a co-located Waste Site? ☐ Yes ☒ No

References/Comments:

## G. COPCs FOR SOILS AND STRUCTURES REMAINING AFTER DEMOLITION

What are the potential contaminants of concern for the remaining below-grade soil?

☒ None ☐ SVOC ☐ VOC ☐ Metals ☐ TPH ☐ Rad ☐ PCBs

☐ Other (Specify): \_\_\_\_\_

Comments:

Summary of in-process soil sampling requirements:

N/A

Constituents detected / concentrations / rationale

N/A

Sample Collection Summary

N/A

## H. NOTES / ADDITIONAL INFORMATION

☒ Check here if additional information / data / maps / sketches are attached to this form.

If checked, list the attachment(s):

Attachment 1. Photographs of AOC Area 9

Attachment 2. WIDS sites and wells around AOC Area 9

Attachment 3. Visual Inspection of 100-N AOC Area 9

Attachment 4. Global Positioning Environmental Radiological Surveyor (GPERS) survey of AOC Area 9

## I. SAMPLING

Are soil samples required to demonstrate that remaining structure or below-grade soils meet cleanup standards?

☐ Yes ☒ No

# 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
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Based on the above information it was determined that sampling: ☐ will ☒ will not be required in order to demonstrate that cleanup criteria have been met.

The individual below acknowledges that the review of this facility has been completed. He or she also commits to provide to the Department of Energy (DOE) and the Washington State Department of Ecology (Ecology) any available information that could alter the sampling decision established in this form.

Information Reviewer Signature

Printed Name  
Dan Saueressig

Date  
9/15/14

The regulatory representative below agrees with the decision outlined in section I of this form for the indicated facility and supports implementation of that decision based on the information currently available.

DOE Signature

Printed Name  
Rudy Guercia

Date

Ecology Signature

Printed Name

Date

## **Attachment 1**

Photographs of AOC Area 9

Photo 1. Location of AOC Area 9 Relative to Other Structures at 100-N

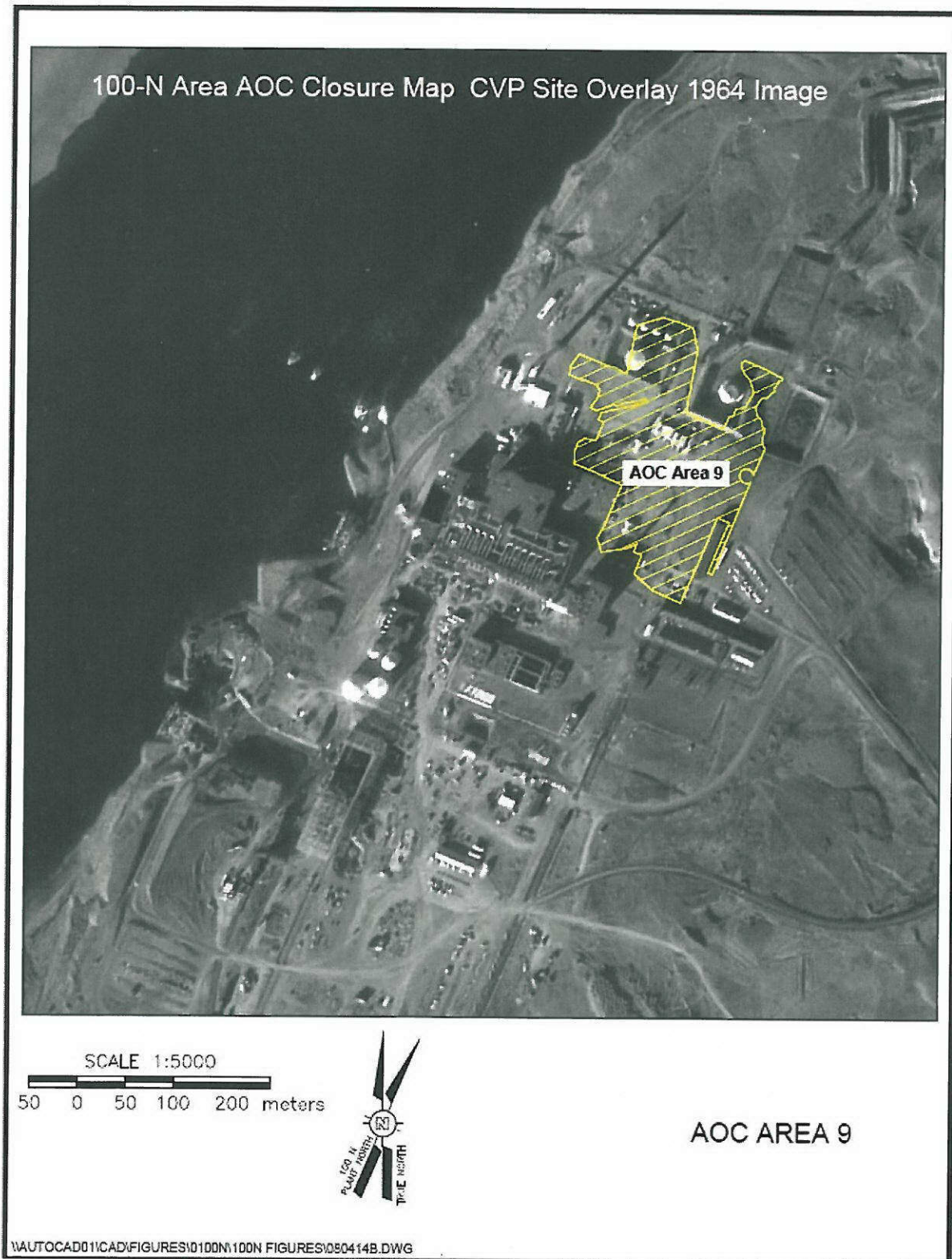


Photo 2. AOC Area 9 at 100-N

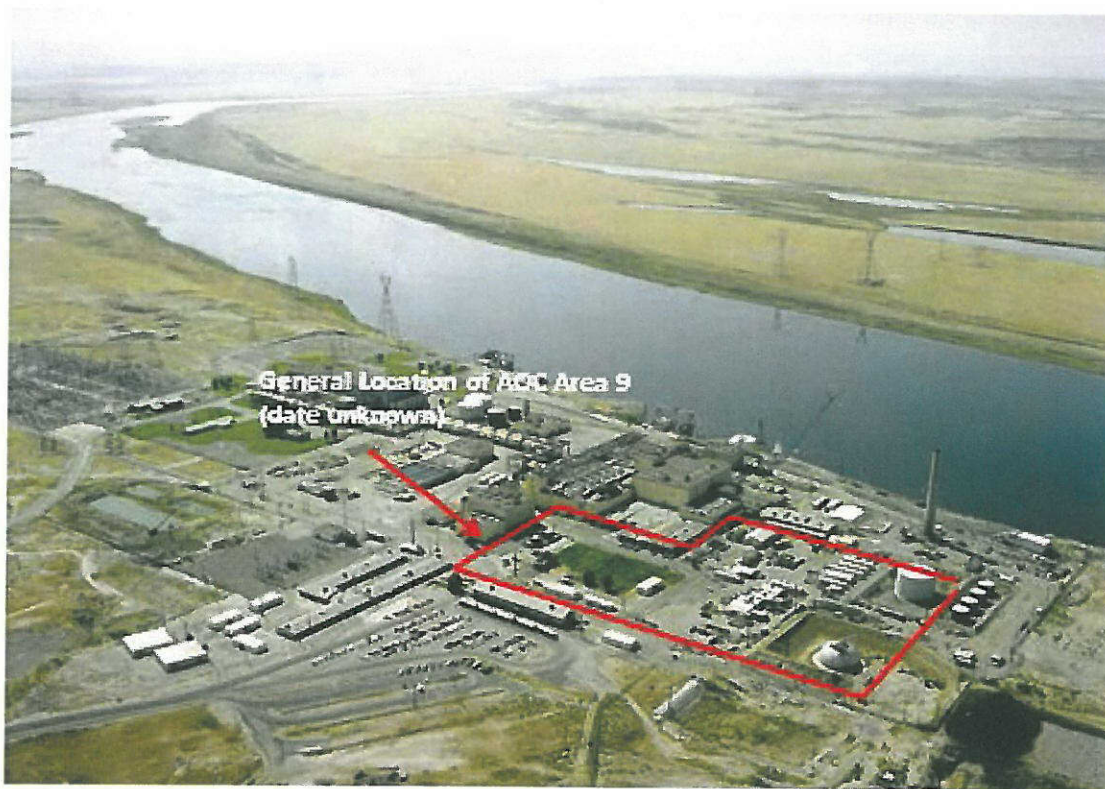
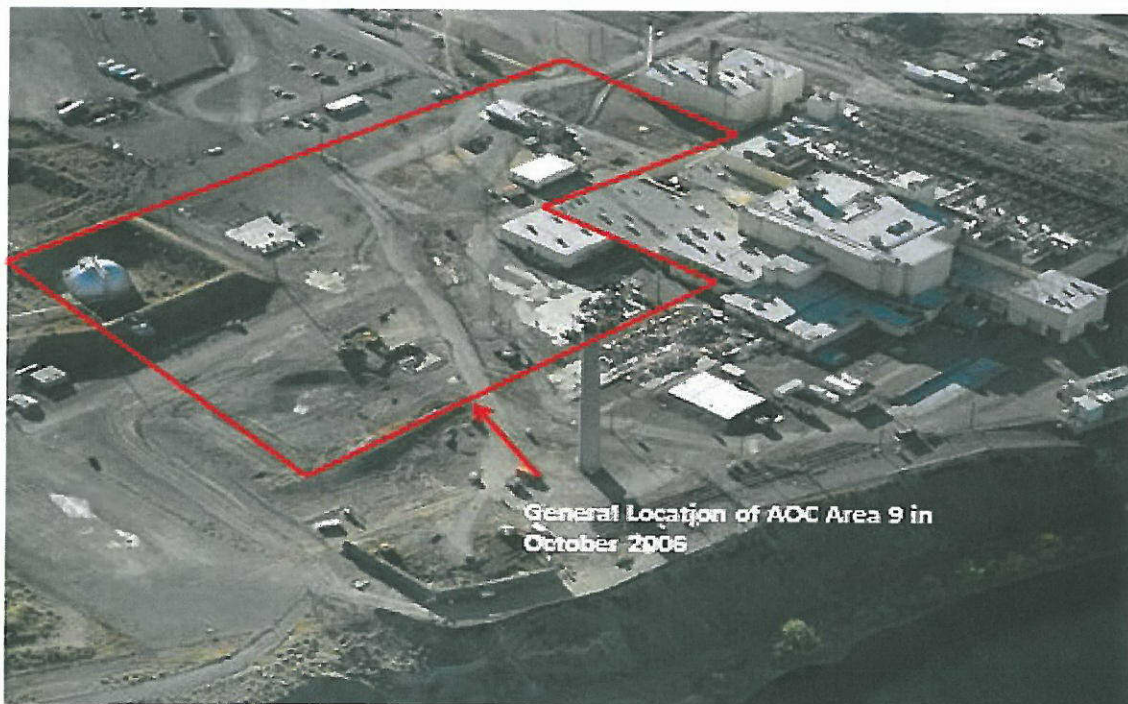


Photo 3. AOC Area 9 in October 2006



**Photo 4. AOC Area 9 in April 2008**



**Photo 5. AOC Area 9 in March 2011**



Photo 6. AOC Area 9 in July 2014



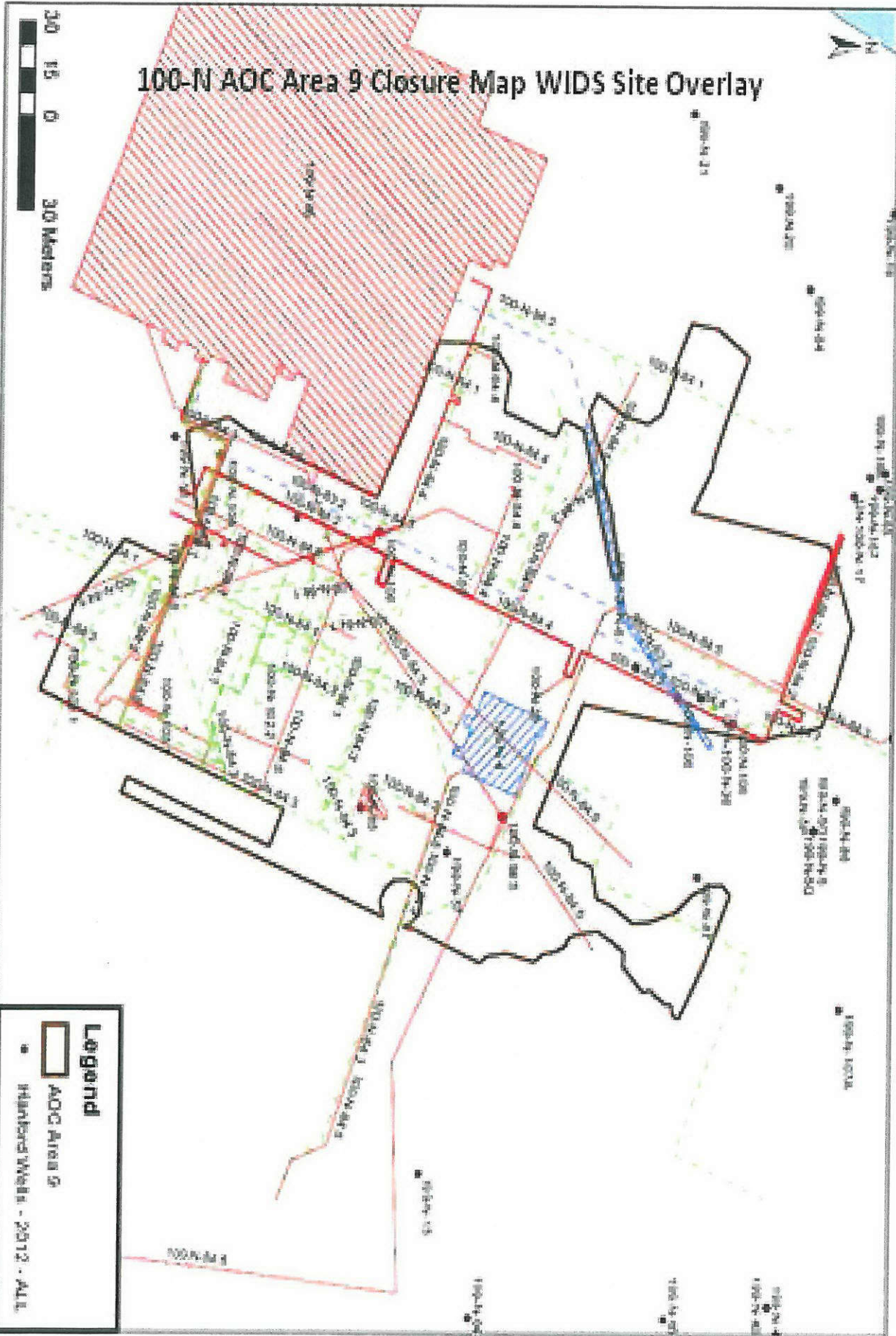
## **Attachment 2**

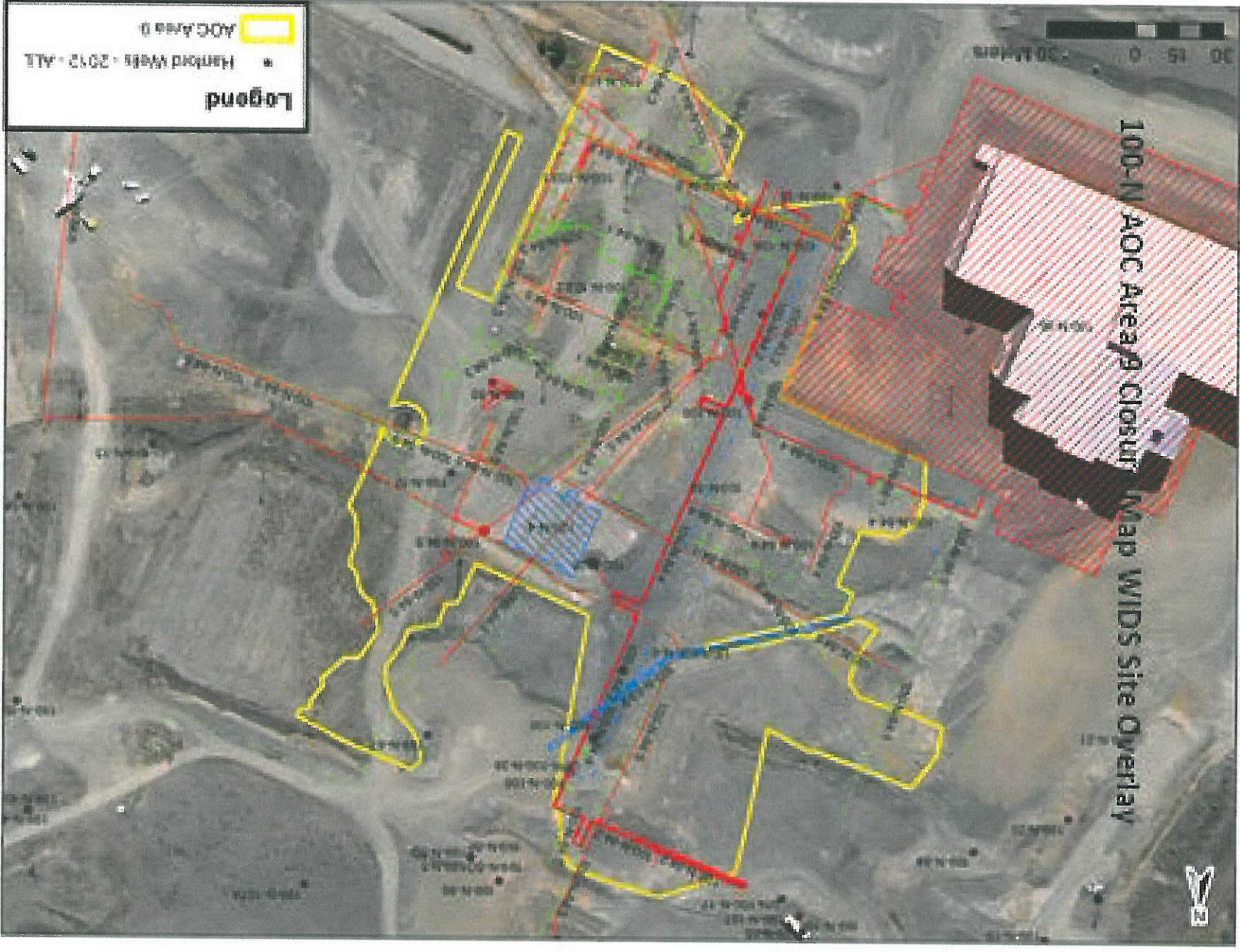
WIDS Sites and Wells Around AOC Area 9

# 100-N AOC Area 9 Closure Map WIDS Site Overlay

30 15 0 30 Meters

**Legend**  
AOC Area 9  
Hazardous Waste - 2012 - ALE





## **Attachment 3**

Visual Inspection of 100-N AOC Area 9

**^WCH Document Control**

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**From:** Saueressig, Daniel G  
**Sent:** Thursday, August 07, 2014 8:28 AM  
**To:** ^WCH Document Control  
**Subject:** FW: VISUAL INSPECTION OF 100-N AOC AREA 9

**Attachments:** Visual Inspection Photographs Area 9.doc; 080414b-Layout1.pdf

Hello Ladies. Can you chron this email (and print and include the color photos), this email documents my visual inspection of the 100-N AOC Area 9. Please send me the chron number too and thanks!

Thanks,

Dan Saueressig  
FR Environmental Project Lead  
Washington Closure Hanford  
521-5328

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**From:** Saueressig, Daniel G  
**Sent:** Wednesday, August 06, 2014 1:45 PM  
**To:** Allen, Mark E  
**Subject:** VISUAL INSPECTION OF 100-N AOC AREA 9

Mark, I went out to 100-N on June 24, 2014 and inspected AOC Area 9 and took photographs (attached). I didn't see any stains or anomalies, the area looked good. Area 9 is a large area (I also included an aerial photograph with Area 9 overlaid), that's why there are so many photographs. Give me a call if you have any questions.

Thanks,

Dan Saueressig  
FR Environmental Project Lead  
Washington Closure Hanford  
521-5328



Visual Inspection  
Photographs ...



080414b-Layout1.p  
df (5 MB)

# **Visual Inspection Photographs of 100-N AOC Area 9**

June 24, 2014

**Photo 1. Northern Portion of AOC Area 9 (facing south)**



**Photo 2. Northern Portion of AOC Area 9 (facing east)**



# Visual Inspection Photographs of 100-N AOC Area 9

June 24, 2014

Photo 3. Eastern Portion of AOC Area 9 (facing southwest)



Photo 4. Eastern Portion of AOC Area 9 (facing south)



# **Visual Inspection Photographs of 100-N AOC Area 9**

June 24, 2014

**Photo 5. Eastern Portion of AOC Area 9 (facing south)**



**Photo 6. Eastern Portion of AOC Area 9 (facing west)**



# **Visual Inspection Photographs of 100-N AOC Area 9**

June 24, 2014

**Photo 7. Eastern Portion of AOC Area 9 (facing north)**



**Photo 8. South Central Portion of AOC Area 9 (facing northeast)**



# **Visual Inspection Photographs of 100-N AOC Area 9**

June 24, 2014

**Photo 9. Central Portion of AOC Area 9 (facing east)**



**Photo 10, Central Portion of AOC Area 9 (facing northwest)**



## Visual Inspection Photographs of 100-N AOC Area 9

June 24, 2014

Photo 11. Southeastern Portion of AOC Area 9 (facing south)



Photo 12. Eastern Portion of AOC Area 9 (facing west)



## Visual Inspection Photographs of 100-N AOC Area 9

June 24, 2014

Photo 13. Eastern Portion of AOC Area 9 (facing south)



Photo 14. Eastern Portion of AOC Area 9 (facing south)



# **Visual Inspection Photographs of 100-N AOC Area 9**

June 24, 2014

**Photo 15. Eastern Portion of AOC Area 9 (facing northwest)**



**Photo 16. Southeastern Corner of AOC Area 9 (facing west)**



# Visual Inspection Photographs of 100-N AOC Area 9

June 24, 2014

Photo 17. South Central Portion of AOC Area 9 (facing west)

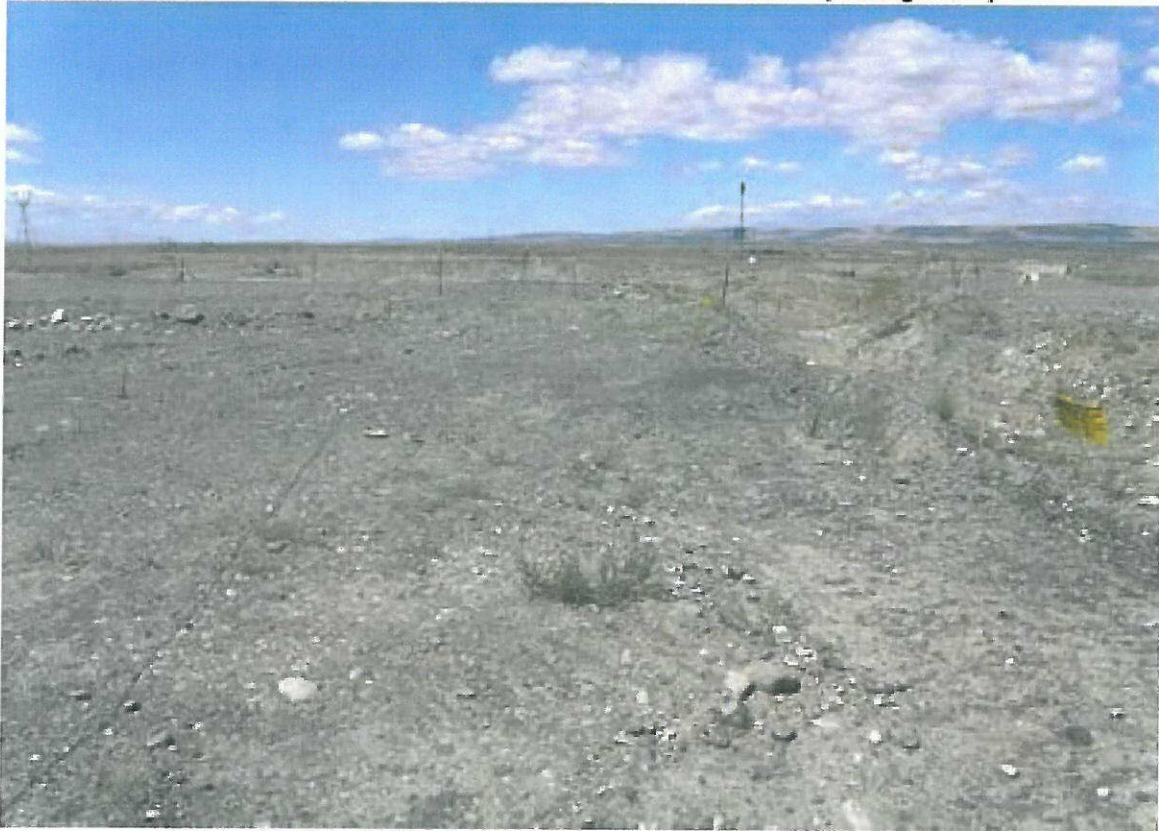


Photo 18. South Central Portion of AOC Area 9 (facing north)



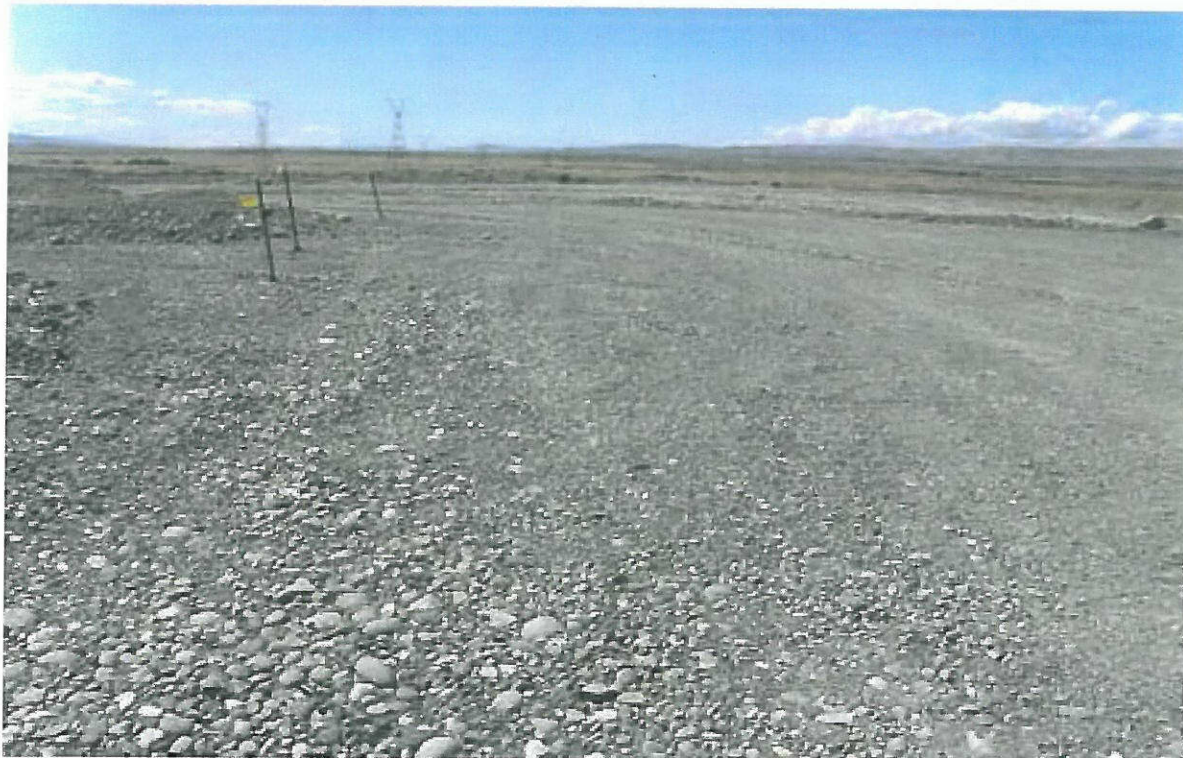
# **Visual Inspection Photographs of 100-N AOC Area 9**

June 24, 2014

**Photo 19. Southwestern Portion of AOC Area 9 (facing north)**



**Photo 20. North Central Portion of AOC Area 9 (facing west)**



100-N Area AOC Closure Map CVP Site Overlay 1964 Image



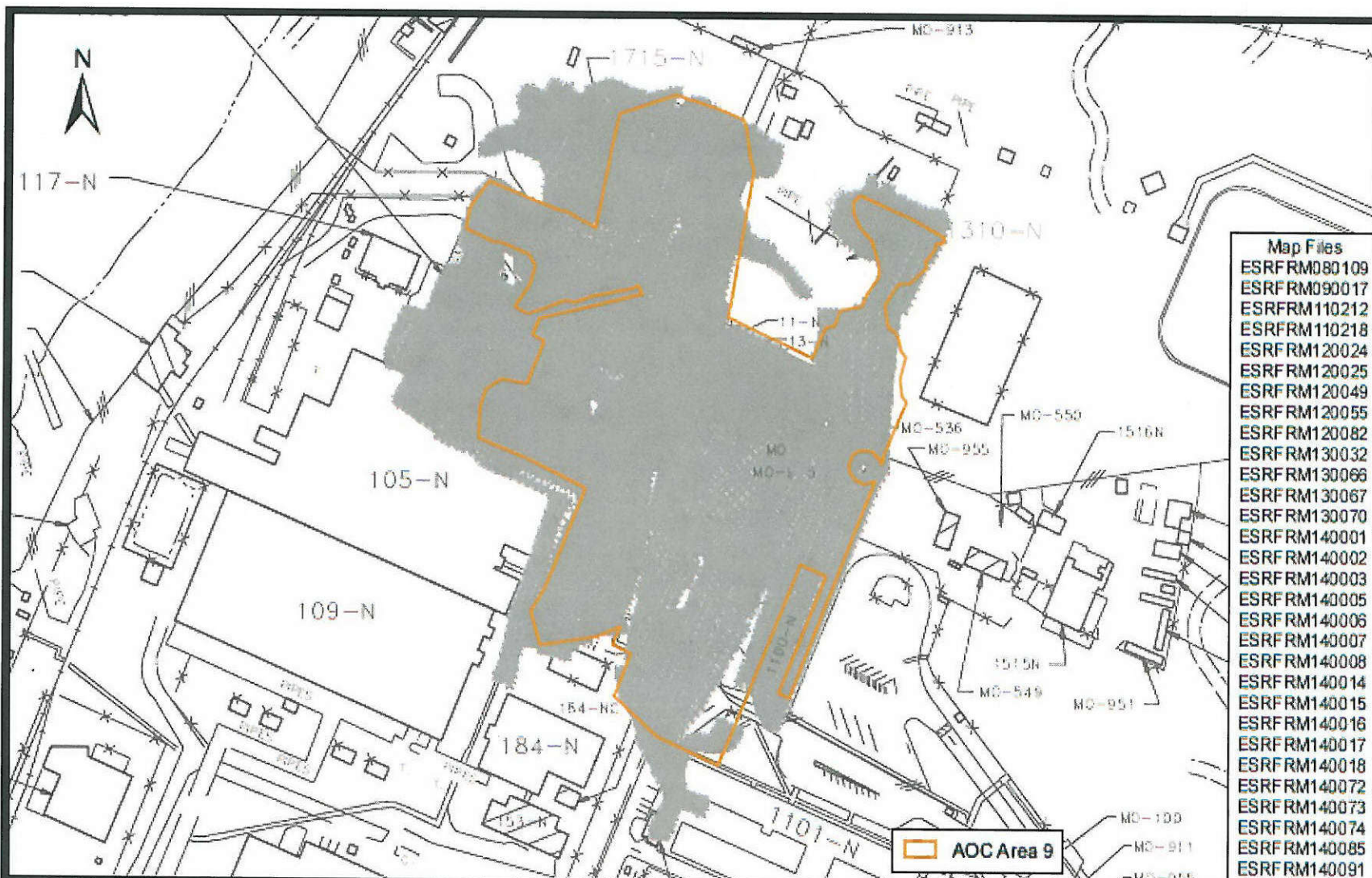
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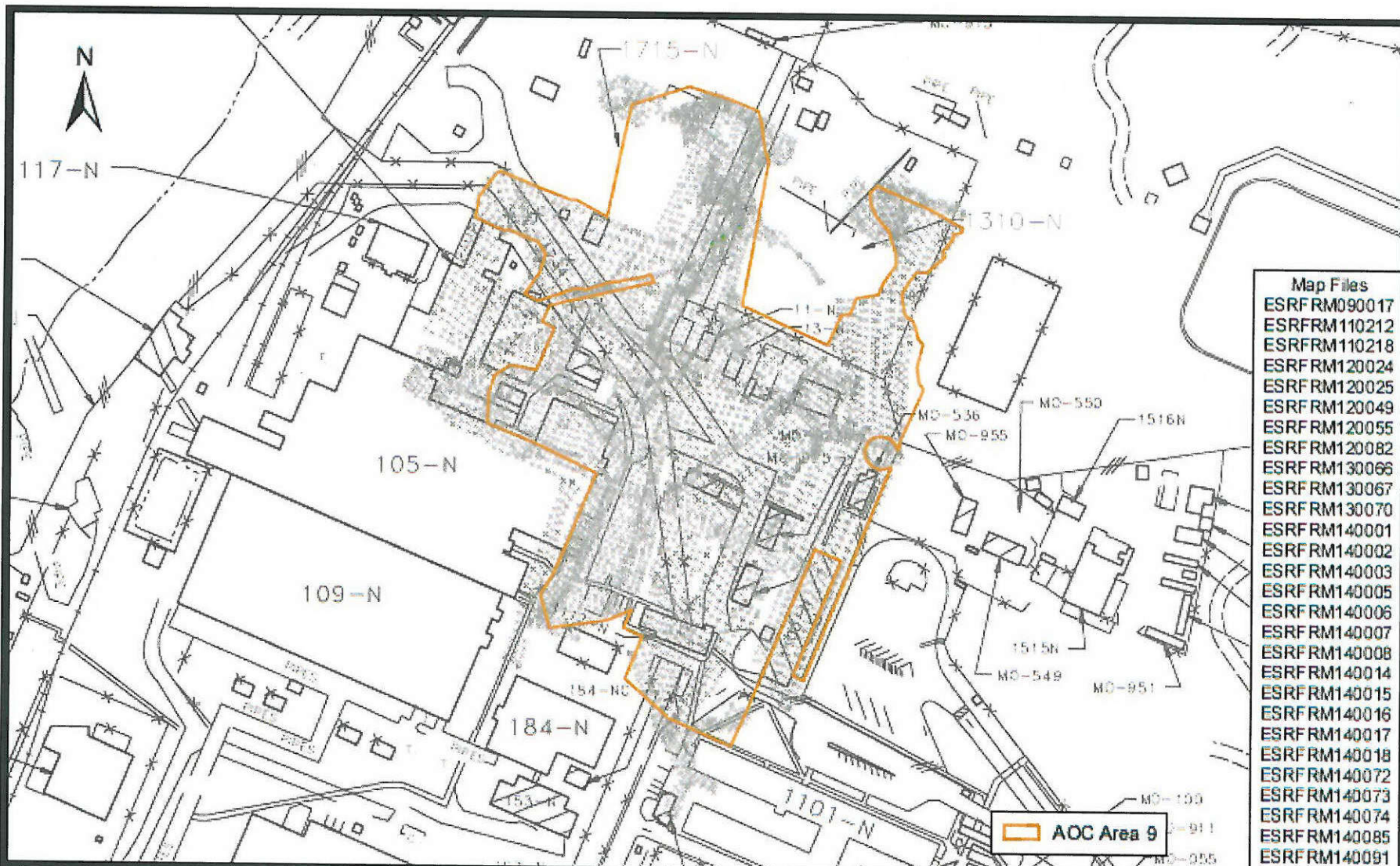


AOC AREA 9

## **Attachment 4**

Global Positioning Environmental Radiological Surveyor (GPERS) Survey  
of AOC Area 9





### Legend

#### NET CPM

#### Summary Statistics

×	<1.5x	bkg	Number of Data Pnts: 10,267
●	1.5x bkg - 5000		Type of Survey: Beta
●	5000 - 10000		Max GCPM: 2,611
●	10000 - 25000		Avg Bkg CPM: 375
●	25000		Area Surveyed: 41,718 m <sup>2</sup>
			Project File: 100N_D4_AOC_9
			Pdf File: 100N_D4_AOC_9B_r5

## 100N D4 AOC Area 9 GPERS Radiological Survey Beta Track Map

0 20 40 60 80 100  
Meters



Survey Map Prepared By Bruce Coomer, ES